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SPECIFICATION FOR CAKES

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SPECIFICATION FOR CAKES

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Indian Standard

SPECIFICATION FOR CAKES

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 30 January 1981, after the draft finalized by the Bakery and Confectionery Industry Sectional Committee had been approved by the Agricultural and Food Products Division Council.

0.2 Cake is a baked food which contains many important nutrients such as proteins, carbohydrates, fats and some minerals. It may also be enriched with vitamins.

0.3 Batter for the cake is usually prepared from a mixture essentially containing *MAIDA*, sugar and eggs in case of sponge cake; and *MAIDA*, sugar, fat, eggs and other ingredients in case of other cakes depending upon the type of cake to be prepared.

0.3.1 Various methods are used for mixing the ingredient. The batter of requisite mass is put into cake tins and baked in an oven at suitable temperature for suitable time.

0.4 In the preparation of this standard, due consideration has been given to the Prevention of Food Adulteration Act, 1954 and the Rules framed thereunder. Due consideration has also been given to the Standards of Weights and Measures (Packaged Commodities) Rules, 1977. This standard is, however, subject to the restrictions imposed under these, wherever applicable.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and methods of sampling and test for plain, fruit and sponge cakes.

*Rules for rounding off numerical values (*revised*).

2. TYPES

2.1 The cakes shall be of any of the following types:

- a) Plain cakes,
- b) Fruit cakes, and
- c) Sponge cakes.

3. INGREDIENTS

3.1 All ingredients shall conform to the relevant Indian Standard specifications, where available and other materials shall be free from foreign matter, insect infestation and objectionable flavours and odours.

3.2 **Essential Ingredients** — The following materials conforming to the specifications given below shall be used in the preparation of the batter for the different types of cakes:

<i>Plain Cake</i>	<i>Fruit Cake</i>	<i>Sponge Cake</i>
a) <i>MAIDA</i>	a) <i>MAIDA</i>	a) <i>MAIDA</i>
b) Shortening	b) Shortening	b) Sugar
c) Sugar	c) Sugar	c) Eggs
d) Eggs	d) Eggs	
	e) Fruits (dry or preserved)	

NOTE — The pH of the batter shall be adjusted between 5 and 6.

3.2.1 *MAIDA* — Low gluten, enriched or non-enriched conforming to IS : 9194-1979*.

3.2.2 *Shortening* — Butter or margarine or hydrogenated groundnut oil or other hydrogenated edible oils or their mixture free from 'Free oil' conforming to the standards specified under Prevention of Food Adulteration Rules.

3.2.3 *Sugar* — Conforming to IS : 1151-1969† or IS : 498-1970‡.

3.2.4 *Eggs* — Poultry eggs, fresh and of good quality or dried egg products.

3.3 **Other Ingredients** — In addition to the essential ingredients specified under 3.2, any of the following ingredients may be added to the cake batter.

*Specification for wheat flour for use by cake industry.

†Specification for refined sugar (*first revision*).

‡Grading for vacuum pan sugar (plantation white) (*third revision*).

3.3.1 One or more of the ingredients given below may be added:

- a) Candied peel (orange, lemon, malta and grape fruit);
- b) Glazed cherries;
- c) Crystallized ginger;
- d) *PETHA*
- e) Dry fruits and nuts such as sultanas, black sultanas, raisins, currants, dates, walnuts, cashewnuts, almonds and peanuts;
- f) Cocoa powder (*see* IS : 1164-1969*);
- g) Desiccated coconut (*see* IS : 966-1975†);
- h) Flavouring essences;
- j) Edible oilseeds, flours, concentrates and isolates conforming to relevant Indian Standards;
- k) Honey;
- m) Liquid glucose (*see* IS : 873-1974‡);
- n) Milk and milk products;
- p) Spices and herbs (nutmeg, cinnamon, cardamoms, cloves, mixed spices, and herbs, etc);
- q) Edible starch;
- r) Glycerine;
- s) Semolina;
- t) Modified starches;
- u) Defatted or lecithinated soya flour;
- v) Sorbitol, liquid or powder;
- w) Molasses, foodgrade, and
- y) Aerating agents—permitted in the PFA Rules.

3.3.2 Baking Powder — Conforming to IS : 1159-1981§ or any other permitted mixture of aerating agents.

3.3.3 Water — Potable.

3.3.4 Mould Inhibitors — The following mould inhibitors in the quantities given against each may be permitted.

3.3.4.1 Calcium or sodium propionate — Not exceeding 0.5 percent of the mass of *MAIDA*.

*Specification for cocoa-powder (*first revision*).

†Specification for desiccated coconut (*first revision*).

‡Specification for liquid glucose (*first revision*).

§Specification for baking powder (*first revision*).

3.3.4.2 Sodium diacetate — Not exceeding 0·4 percent of the mass of *MAIDA*.

3.3.4.3 Sorbic acid — Not exceeding 0·1 percent of the mass of *MAIDA*.

3.3.5 Emulsifiers and Stabilizers — Lecithin, glycerol monostearate, polyglycerol monostearate, stearyl lactylates.

3.3.6 Whipping Agents

3.3.7 Colouring Matter — Permitted in the PFA Rules.

4. REQUIREMENTS

4.1 Description — The cake shall be suitably baked with due allowance for heat penetration of the edges. It shall not show signs of under baking or over baking. Cake shall be moist, uniform in texture with even distribution of added ingredients like peel and fruits and shall be spongy. It shall have the colour, texture, flavour and aroma characteristic of the typical well-baked cakes and shall be free from any evidence of rancidity or other objectionable tastes, insect or fungus and mould infestation.

NOTE — The appearance, taste and odour shall be determined by visual inspection, and by organoleptic tests.

4.2 The cake shall be manufactured under hygienic conditions (*see* IS : 2491-1972*). It shall be free from pathogenic organisms.

4.3 The cake shall also conform to the requirements given in Table 1.

5. MASS

5.1 The mass of the plain cake shall conform to any of the following mass, 24 hours after manufacture:

<i>Size</i>	<i>Mass</i>	<i>Tolerance</i>
1	100 g	± 5·0
2	200 g	± 7·5
3	400 g	± 10·0
4	800 g	± 15·0

*Code for hygienic conditions for food processing units (*first revision*).

TABLE 1 REQUIREMENTS FOR CAKE

(*Clauses 4.3 and 8.1*)

Sl No.	CHARACTERISTIC	REQUIREMENT			METHOD OF TEST, REF TO APPENDIX OF IS : 1011-1981*
		Plain Cake	Fruit Cake	Sponge Cake	
(1)	(2)	(3)	(4)	(5)	(6)
i)	Moisture, percent by mass, <i>Max</i>	15-25	15-25	20-27	B
ii)	Acid insoluble ash (on as is basis), percent by mass, <i>Max</i>	0.1	0.1	0.1	C
iii)	Acidity of extracted fat (as oleic acid), percent by mass, <i>Max</i>	1.0	1.5	1.0	D

NOTE — In fruit cakes, minimum quantity of fruits shall be not less than 7 percent of the batter when determined by the method of test given in Appendix A.

*Specification for biscuits (*second revision*).

6. PACKING AND MARKING

6.1 Packing — The cake shall be wrapped or packed in clean waxed paper, grease-proof polyethylene or any other suitable wrapper or tins. The cakes should be thoroughly cooled in clean atmosphere before packing.

6.2 Marking — The following particulars shall be clearly and indelibly marked on each pack of cake on the outer side of the wrapper; printing ink if any, shall be non-toxic and non-transferable:

- Name and type of the material;
- Name and address of the manufacturer;
- Batch or code number;
- Size or net mass of the cake (*see 5.1*);
- The statement contains permitted colouring agents, if colouring agents are used;
- Declaration of added mould inhibitors, if any (*see 3.3.4*); and
- Any other details required under the Standards of Weights and Measures (Packaged Commodities) Rules, 1977.

6.2.1 The containers of the cake may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7. SAMPLING

7.1 Representative samples of cakes shall be drawn as prescribed in Appendix A of IS : 1483-1979*.

8. TESTS

8.1 Tests shall be carried out as prescribed in the appropriate appendices specified in col 6 of Table 1.

8.2 Quality of Reagents — Unless specified otherwise, pure chemicals shall be employed in tests and distilled water (*see* IS : 1070-1977†) shall be used where the use of water as a reagent is intended.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

A P P E N D I X A

(*Table 1, Note*)

DETERMINATION OF FRUITS

A-0. This method determines both dry fruits (raisins, cashewnuts, almonds and walnuts) and preserved fruits (*PETHA*, peel, *KARONDA* and cherries) in fruit cakes.

A-1. EQUIPMENT

A-1.1 Bread or Cake Knife

A-1.2 Brush

*Specification for white bread (*second revision*).

†Specification for water for general laboratory use (*second revision*).

A-1.3 Filter Paper or Clean Cloth

A-1.4 Weighing Balance

A-2. METHOD

A-2.1 Weigh four cake slices (approximately, 100 g) accurately. Pick one piece of preserved fruit and dry fruit and wipe them with a camel hair brush on a filter paper or clean cloth. Weigh the fruits so collected and calculate the percentage of fruits from the mass of fruits picked out separately for preserved fruits and dry fruits.

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